

ABSTRACT

The present invention relates to the field of cables comprising optical means for monitoring temperature and strain. More precisely, the invention provides a cable 1 comprising an outer protective sheath 2 and optical means for monitoring temperature and strain, said optical means being within said outer protective sheath 2 and comprising a first tube 4 including at least a first optical fibre 8 in order to monitor the temperature, said first optical fibre 8 being loose in said first tube 4 and comprising at least one reflecting section called Bragg grating and at least a second optical fibre 7 including at least one Bragg grating in order to monitor the strain. Said second optical fibre 7 is outside said first tube 8, said optical means further comprising means 6 for tightening said second optical fibre 7.